229048

STATE OF SOUTH CAROLINA)
)
(Caption of Case))
)
Amended Project Development Application of Duke Energy Carolinas, LLC for Approval of Decision to Incur Nuclear Generation Pre-Construction Costs)
)
)
)
)
)
)

BEFORE THE
PUBLIC SERVICE COMMISSION
OF SOUTH CAROLINA

COVER SHEET

DOCKET
NUMBER: 2011 - 20 - E

(Please type or print)

Submitted by: Robert Guild
SC Bar Number: 2358
Address: 314 Pall Mall Street
Columbia, SC 29201
Telephone: 803 252 1419
Fax: 803 252 1419
Other:
Email: bguild@mindspring.com

NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

☐ Emergency Relief demanded in petition ☐ Request for item to be placed on Commission's Agenda expeditiously

☒ Other: Prefiled Direct Testimony and Exhibit

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
☒ Electric	☐ Affidavit	☐ Letter	☐ Request
☐ Electric/Gas	☐ Agreement	☐ Memorandum	☐ Request for Certificatio
☐ Electric/Telecommunications	☐ Answer	☐ Motion	☐ Request for Investigatior
☐ Electric/Water	☐ Appellate Review	☐ Objection	☐ Resale Agreement
☐ Electric/Water/Telecom.	☐ Application	☐ Petition	☐ Resale Amendment
☐ Electric/Water/Sewer	☐ Brief	☐ Petition for Reconsideration	☐ Reservation Letter
☐ Gas	☐ Certificate	☐ Petition for Rulemaking	☐ Response
☐ Railroad	☐ Comments	☐ Petition for Rule to Show Cause	☐ Response to Discovery
☐ Sewer	☐ Complaint	☐ Petition to Intervene	☐ Return to Petition
☐ Telecommunications	☐ Consent Order	☐ Petition to Intervene Out of Time	☐ Stipulation
☐ Transportation	☐ Discovery	☒ Prefiled Testimony	☐ Subpoena
☐ Water	☒ Exhibit	☐ Promotion	☐ Tariff
☐ Water/Sewer	☐ Expedited Consideration	☐ Proposed Order	☐ Other:
☐ Administrative Matter	☐ Interconnection Agreement	☐ Protest	
☐ Other:	☐ Interconnection Amendment	☐ Publisher's Affidavit	
	☐ Late-Filed Exhibit	☐ Report	

RETURN DATE: 06
SERVICE: 06

ROBERT GUILD

Attorney at Law

314 Pall Mall • Columbia, South Carolina 29201 • 803-252-1419 • bguild@mindspring.com

April 6, 2011

Ms. Jocelyn D. Boyd
Chief Clerk
Public Service Commission of South Carolina
Post Office Drawer 11649
Columbia, SC 29211

Re: Amended Project Development Application of Duke Energy Carolinas, LLC for Approval of Decision to Incur Nuclear Generation Pre-Construction Costs
Docket No. 2011-20-E

Dear Ms. Boyd:

Enclosed please find for filing and consideration the Direct Testimony of Nancy Brockway and Exhibit NB-1, on behalf of the South Carolina Coastal Conservation League, together with Certificate of Service reflecting service upon the parties of record.

With kind regards I am

Sincerely,

Robert Guild

Encl.s
CC: Parties of Record

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA
DOCKET NO. 2011-20-E

In the Matter of	)	
	)	
Amended Project Development Application of Duke Energy Carolinas, LLC for Approval of Decision to Incur Nuclear Generation Pre-Construction Costs	)	**Certificate of Service**

I hereby certify that on this date I served the above Direct Testimony of Nancy Brockway and Exhibit by placing copies of same in the United States Mail, first-class postage prepaid, addressed to:

Charles A. Castle , Senior Counsel
Timika Shafeek-Horton , Counsel
Duke Energy Carolinas, LLC
Post Office Box 1006/EC03T
Charlotte, NC, 28201

Scott Elliott , Counsel
Elliott & Elliott, P.A.
1508 Lady Street
Columbia, SC, 29201

Courtney D. Edwards , Counsel
Nanette S. Edwards , Counsel
Shannon Bowyer Hudson , Counsel
Office of Regulatory Staff
1401 Main Street, Suite 900
Columbia, SC, 29201

Frank R. Ellerbe, III , Counsel
Bonnie D. Shealy , Counsel
Robinson, McFadden & Moore
Post Office Box 944
Columbia, SC, 29202

Tom Clements
1112 Florence Street
Columbia, SC 29201

April 6, 2011

Robert Guild

BEFORE THE PUBLIC SERVICE COMMISSION
OF
SOUTH CAROLINA
DOCKET NO. 2011-20-E

In the Matter of	)	
Amended Project Development Application of	)	**DIRECT TESTIMONY**
Duke Energy Carolinas, LLC for Approval of	)	**OF**
Decision to Incur Nuclear Generation Pre-	)	**NANCY BROCKWAY**
Construction Costs	)	

on behalf of the
South Carolina Coastal Conservation League

APRIL 6, 2011

Q. Please state your name, affiliation and address.

A. My name is Nancy Brockway. I am the principal of NBrockway & Associates, 10 Allen Street, Boston, MA 02131.

Q. On whose behalf are you testifying in this proceeding?

A. My testimony is being filed by Intervenor South Carolina Coastal Conservation League (CCL).

Q. Please describe your qualifications.

A. Since 1983, my professional focus has been the energy and utility industries, with particular attention to the role of regulation in the protection of consumers and the environment, energy efficiency, and the balance between the interests of the utility and those of other stakeholders.

I have extensive experience as a regulator. I was a member of the staff of the Maine Public Utilities Commission from 1983 to 1986. I joined the Massachusetts Department of Public Utilities in 1986 as a staff attorney and hearing officer. I became Assistant General Counsel, and in 1989 I was appointed General Counsel, a position I held until 1991.

In October, 1998, I was appointed to the New Hampshire Public Utilities Commission. I served as a Commissioner until October 2003. While on the New Hampshire Commission, I was a member of several NARUC committees, including the Committee on Energy Resources and the Environment, and the Committee on Competition in the Electric Industry. I was Vice-Chair of the Committee on Consumer Affairs. I was a member of the Advisory Committee for the regional transmission

operator in New England (ISO-NE), and of the Advisory Committee to the New England Power Pool Appeals Board.

Before joining the New Hampshire Commission, from 1991 until 1998, I was a consultant and expert witness for consumers with the National Consumer Law Center. During this period, I was a member of the Massachusetts Energy Facility Siting Council. Since leaving the New Hampshire Commission, I have provided representation and consulting services to the Kansas, Ohio, Delaware, Hawaii , Colorado and Vermont commissions, and the Utility and Review Board of Nova Scotia, as well as a number of consumer advocate offices and others. In 2007 and 2008, I served as Chief and then Director of Multi-Utility Research and Analysis, on a contract and staff basis respectively, for the National Regulatory Research Institute. While there I completed major research on the history of pre-approval regulation, and the policy considerations raised by such forms of regulation.

From 2004 to 2008, I served as Chair of the Board of PAYS America, Inc., a non-profit organization devoted to disseminating information about Pay As You Save®, an innovative on-the-bill-financing method to expand markets for energy efficiency. I currently assist the Consumer Advocate hired by the Nova Scotia Utilities and Review Board, and the Massachusetts Low Income Energy Affordability Network, in reviewing and funding energy efficiency in those jurisdictions.

Q. Have you previously testified before utility regulatory commissions?

A. Yes. I have filed testimony in over 50 proceedings at 18 state regulatory commissions, as well as the FERC. A resume and list of my previous testimonies is attached as Exhibit NB-1.

Q. Have you previously testified before this Commission?

A. Yes. I filed testimony in Docket No. 2008-196-E, the Commission's consideration of the Combined Application of South Carolina Electric & Gas Company for a Certificate of Environmental Compatibility and Public Convenience and Necessity and for a Base Load Review Order for the Construction and Operation of a Nuclear Facility at Jenkinsville, South Carolina (the V.C. Summer plant presently being built by SCANA and Santee Cooper).

Q. Do you have experience in the field of electricity resource planning, and nuclear generation in particular?

A. Yes. I have participated in numerous regulatory proceedings involving electricity resource planning, including nuclear power, at various times since 1983. When I was hired by then-Commission Chair Peter A. Bradford to serve as a staff advocate and advisor at the Maine Public Utilities Commission, one of my first responsibilities was to develop and present staff's position on the prudence of and cost recovery for the Seabrook II nuclear generation station, which had recently been cancelled. At the Maine Commission, I also was lead advocate for the staff in its assessment of the merits of completing Seabrook I, when that plant's support by Wall Street was withdrawn. I also was staff attorney on the team that subsequently negotiated a settlement concerning rates and cost recovery for Seabrook I with Central Maine Power Company, the Maine Joint Owner of the plant. I was a staff advocate assigned to what were among the first Conservation and Load Management dockets in the United States, in which the fundamental regulatory elements of demand side management were developed. I also had responsibility for staff advocacy on non-utility

generation dockets under the Public Utilities Regulatory Policies Act of 1978 and state law. I was staff advocate in a number of time-of-use rate design proceedings, involving the theory and practice of this form of demand management. All these proceedings necessarily involved consideration of resource planning, including review of production cost modeling, forecasting and resource selection.

While at the Massachusetts Department of Public Utilities, beginning in 1986, I was the hearing officer and key advisor to the Commission on a number of cases involving generation planning, including nuclear plants. The Massachusetts Commission during this period dealt with ratemaking treatment for Seabrook I costs for Joint Owners in the Commonwealth, and ratemaking treatment for Pilgrim nuclear generating station in Plymouth, Massachusetts. I presided over the dockets in which the Commission addressed a projected near-term inability to meet objective capacity requirements under the New England Power Pool Agreement, the development of Conservation and Load Management initiatives by Massachusetts utilities, and the PURPA and state law effort to encourage development of independent power production. These proceedings required a thorough understanding of the resource planning process, alternative resource options, and the treatment of risk in the plant development process.

During my tenure at the National Consumer Law Center, I continued my work in the area of conservation and load management. I also devoted myself to the study of industry structures, and provided advice to consumer advocates in the ongoing debate about restructuring the electric industry to introduce competition in the generation function.

When I was appointed to the New Hampshire Public Utilities Commission in 1998, the state was in the midst of making a difficult transition to the competitive model for electric supply. Properly valuing assets of the New Hampshire utilities, including their ownership shares in or contract rights to nuclear generation in New England, was an important task of the Commission. The Commission specifically had to evaluate the proposal for Public Service Company of New Hampshire and other Joint Owners to sell Seabrook Station, a transaction we approved in 2001.

After leaving the New Hampshire Commission, I have participated in various demand side management proceedings, and in proceedings before this Commission and the Nuclear Regulatory Commission concerning approvals for the V.C. Summer nuclear station. In 2008, I researched risk allocation and pre-approval issues for the National Regulatory Research Institute, where I was the Director of Multi-Utility Research and Analysis.

Q. Please summarize the materials you reviewed in developing your testimony.

A. In developing my analysis, I reviewed orders from earlier South Carolina dockets on pre-approval, the Company's filing, the Company's Integrated Resource Plan (IRP), responses to data requests filed by CCL and by others, and material available in the public record concerning nuclear power today and the events in Fukushima, Japan. I also took into account my nearly 30 years of experience with regulatory issues, including many cases and situations concerning the construction and operation of nuclear power plants, and ratemaking treatment of the costs of such investments.

Q. What approvals is Duke seeking from the South Carolina Commission in this docket?

A. Duke Energy Carolinas, LLC ("Duke Energy Carolinas""Duke" or "Company") on January 7, 2011 filed its Amended Application for approval of Duke Energy Carolinas' decision to continue to incur what it calls "additional pre-construction costs" for the Company's proposed William States Lee, III Nuclear Station in Cherokee County, South Carolina ("Lee Nuclear Station"). In the instant application, Duke Energy Carolinas estimates that it will incur additional pre-construction costs of $229 million through December 31, 2013. Together with the amount spent under the Commission's June 2008 Order Duke Energy Carolina's original application, the Company seeks authority to spend a total of $459 million (including allowance for funds used during construction ("AFUDC")) prior to its hoped-for receipt of a Combined Construction and Operating License ("COL") from the Nuclear Regulatory Commission ("NRC") for the project. In the Amended Application, Duke Energy Carolinas seeks a determination from this Commission that it is prudent for the Company to incur these additional costs considered by the Company to be necessary to continue development work.

Q. What is the purpose of your testimony in this docket?

A. The South Carolina Coastal Conservation League (CCL) has asked me to review the Duke Amended Application, and provide my opinion on the prudence of proceeding with the activities and investments for which Duke is seeking approval in this docket, and on the regulatory issues raised by Duke's application.

Q. Please summarize the conclusions you reach based on your analysis of the Amended Application and related material.

A. I conclude that it would not be prudent for Duke to proceed with additional pre-construction activities as proposed. The Company should suspend activities that are at risk of being rendered unnecessary for or inapplicable to further development at the site, or that would represent stranded investment in the event Duke decides not to proceed to construction of its proposed plants at the Lee site.

Duke has made further construction of this South Carolina facility dependent on approvals by North Carolina, including its demand for so-called "super-CWIP" and its need to gain approval to complete the option sale to a Florida municipality for some of the Lee capacity. Duke's conditions also show that the utility is not willing to take any financial risks relating to the project. Duke's posture in this regard is similar to that of the financial community, which has long regarded new nuclear construction as extremely risky economically. The recent events at Fukushima Daiichi plant in Japan have only solidified Wall Street's concerns about nuclear development. While Lee would not suffer the same precipitating events as those that led to the Fukushima catastrophe, those events drive home the reality that it is impossible to foresee all the combinations of difficulties that may confront plant operators. For example, other factors may possibly shut down both off-site power and on-site back-up, as happened at Fukushima. Of course, there is still no plan for permanent storage of nuclear plant waste, and progress in that direction has halted in recent years. In any event, it is not sensible to continue on the current path towards construction of Lee while the industry and the nuclear regulatory community review the causes of the ongoing disaster at

Fukushima, and work on such changes to plant design and operation as will be necessary to eliminate similar risks.

In addition, the need for the plant is not clear, and meanwhile there are clean and cost-effective alternatives (which would provide employment in South Carolina). The utility should explore these other options, especially greater levels of demand-side management (DSM) and South Carolina renewable energy.

Also, all those concerned with the reinvigoration of the nuclear option, including the industry, the finance community, the Nuclear Regulatory Commission, and policy makers, are reviewing the grave problems that face Tokyo Electric Company. Industry and policy makers recognize the severity of the problems highlighted by the Japan disaster, and have begun the work of determining what is necessary to prevent any such events at American plants, and to assure the public that necessary steps have been taken in light of the Japanese experience. Until this review is completed and any necessary actions are taken to build in protection against similar calamities, it would not be prudent to press ahead with major infusions of ratepayer money into a project that may have to be radically revised even if it were to continue.

Q. What additional conclusions do you reach in your analysis?

A. I conclude that under present circumstances, it is unlikely that Duke will be able to obtain low-cost or low-risk loans backed by the federal government for its investments in Lee, at least for some years. The events in Fukushima have put further federal support for nuclear energy on hold at the least, despite the Administration's continued commitment to this source of power. In any case, the budget deficit debate overshadows discussions of additional commitments of federal funds.

Q. Do you reach any further conclusions based on your analysis in this docket?

A. Yes. South Carolina can continue its pursuit of the nuclear option without the construction of the Lee nuclear station, or its construction on the present schedule. The Duke vision of a regional generation plan should not be fulfilled by South Carolina selling off a "piece of the rock" out of state. Duke and others who may wish to invest in further nuclear plants at this time have the option of seeking a share of the V.C.Summer nuclear plant, already under construction by SCANA and Santee Cooper. This South Carolina project is further along than Lee in all aspects. Duke's participation in Summer would also help mitigate some of the concerns about the financial impact of building Summer on SCANA and Santee Cooper. Capacity from Summer is available: Santee Cooper is trying to sell part of its share to Florida utilities. In the light of financial constraints on its customer base, SCANA may also be willing to sell a share of Summer to Duke.

Q. Based on these conclusions, what recommendations do you make to the Commission?

A. I make the following recommendations for Commission action in this docket:

(a) Reject the Duke application for approval of further pre-construction investments at Lee, at least until:

[i] the NRC and the industry have completed their review of the problems at the Fukushima nuclear power plants, and have adopted any revisions to standard designs and regulations for new nuclear plants in the United States, and Duke has incorporated these changes, and

[ii] Duke has received such approvals and authorities as it says now that it needs from North Carolina for cost recovery in that state, including so-called super-CWIP and the sale of an option on Lee capacity to JEA, and

[iii] Duke has received authority for the sale of the option to JEA from this Commission, if on a finding that the benefits to South Carolina consumers exceed the costs and risks of the option.

(b) Require Duke, when and if it does return to the Commission for pre-approval of further investments in the Lee plant, to update its IRP, and reflect different mixes of options without Lee, including greatly increased investment in renewables and DSM in South Carolina, and to explain the need for baseload power as opposed to peaking or intermediate power.

(c) Require Duke to attempt to purchase capacity from or a share in the Summer nuclear station in Jenkinsville, and if unsuccessful, explain the reasons to the Commission.

If the Commission does authorize additional pre-construction investments by Duke at the Lee station at this time, I recommend that that the authorization be limited to the costs of those activities necessary only to preserve the option of proceeding with the plant on a reasonable timetable, taking into account the changed circumstances facing Duke and its South Carolina customers since the utility initiated the Lee project in 2007.

Q. Please address the statements by Duke that it will not proceed with Lee absent super-CWIP from North Carolina.

A. Duke has made it clear that it will cease investing in the Lee project if the North Carolina legislature does not authorize so-called "super-CWIP" rate treatment. Super-CWIP is an informal term used to describe the proposal before the North Carolina legislature to give utilities special rights to charge customers for plants like Lee. CWIP of course stands for Construction Work in Progress, and is a shorthand for the commission authorization of a utility to start recovering the costs of constructing utility plant before the plant is completed and put into service. Absent explicit authorization (such as the pre-construction cost recovery being considered by the South Carolina Commission under South Carolina law), traditional ratemaking requires a utility to show that a plant is used and useful, and was built and will operate prudently, before the utility can reflect the costs of that plant in rates. Duke in North Carolina does have the ability to seek CWIP from the Commission in a rate case. Super-CWIP would go further, and allow the utility to elect to pass on the construction costs before completion, without the need for a full rate case.

Q. Please address the fact that Duke is seeking permission to sell an option on Lee capacity to JEA in Florida.

A. Duke has entered into an agreement to sell an option for the output from Lee to a Jacksonville, Florida, municipal utility. The terms of the option are controversial, in that Duke will retain all construction risk, without assurances of participation in the plant in the future by JEA. Even though Duke would keep more risk than it should under the terms of the option, it is instructive that Duke has tried to lay off some of the financial risk of owning and operating the plant.

Q. What would be the advantages of buying a share of V.C. Summer?

A. If Duke were to purchase a share of V.C. Summer, it would be pursuing a South Carolina nuclear option that is much closer to realization than the Lee project. As Duke itself notes, Summer (and Vogtle) are first in line to receive COL consideration of the NRC. Summer capacity will be sold to a utility that does not operate in South Carolina if Duke does not purchase capacity from Summer, or a share of Summer. Santee Cooper has signed a letter of intent with a Florida utility for that entity to purchase up to 10% of the Summer plants, and their associated output. Santee Cooper has made it known it wishes to sell enough of its Summer capacity to reduce its share from 45% to 20%. South Carolina nuclear power will be sold out of state, if Duke does not step up and enter into the V.C.Summer project.

Q. Would there be other benefits to South Carolina of a Duke investment in the V.C. Summer project?

A. Yes. Summer is one of the two nuclear stations nationally that are actively proceeding to construction. As a chosen project, Summer is getting priority attention from the NRC in licensing procedures. Again on account of its national status as a flagship of the nuclear renaissance, Summer will continue to warrant the efforts of the industry and of the federal government to ensure a path to safe and secure construction and operation.

Q. Are there other benefits of a Duke investment in the V.C. Summer project?

A. Yes. Duke would both reduce its financial exposure to cost of building two nuclear power plants, and help Santee Cooper and SCANA shoulder the financial burden of the Summer project, by buying into the project. This in turn would help

protect consumers in South Carolina from the uncertainty of nuclear plant construction costs.

IMPACT OF JAPANESE NUCLEAR CATASTROPHE

Q. Please briefly recount the recent events at the nuclear facilities in Fukushima, Japan, following the earthquake and tsunami.

A. As the Commission is well aware, on March 11, northeastern Japan suffered an earthquake measuring 8.9 on the Richter scale, the largest earthquake in Japanese history. This earthquake in turn produced a tsunami 46 feet high that leveled buildings and infrastructure for miles inland. According to the International Atomic Energy Agency,[1] the earthquake and tsunami cut the supply of off-site power to the Fukushima Daiichi nuclear power plant, and disabled the diesel generators intended to provide emergency back-up electricity to the plant's cooling system.

Tokyo Electric Company, operator of the plants, lost about 20% of its nuclear generation supply as a result of the earthquake. Including nuclear plants in other locations, fifteen reactors were shut down, and the losses prompted the first rolling blackouts in the history of the utility.

Since the day of the disaster, Tokyo Electric Company has been struggling to prevent a meltdown in the cores of the reactors at the Fukushima Daiichi station, as well as in the spent fuel storage pools attached to the reactors. Within a day after the earthquake, hydrogen gas pressure had built up in Unit 1, and the

[1] Information on the Fukushima disaster is taken from the IAEA Nuclear Fukushima Accident Update Log, available at http://www.iaea.org/newscenter/news/2011/fukushimafull.html.

resulting explosion ruptured the outer shell of the containment vessel. The next day, an explosion occurred in Unit 3, and later an explosion in Unit 2 may have compromised the unit's containment. Hydrogen gas continues to be created in the damaged reactors, and has had to be vented to prevent recurring explosions that threaten to release larger amounts of radioactive material.

In an effort to avert meltdown, and in the absence of a functioning cooling system, plant operators have tried to cool the reactor cores with sea water. Temperatures in the spent fuel storage ponds had reached double or triple the limits of safety. By March 16, plans were made to dump water on the units from military helicopters, and to use fire hoses to spray cooling water from the ground. Two weeks after the disaster, electricity had still not been restored to the control rooms' instrumentation despite ongoing efforts. Workers have to be removed from the site from time to time due to high radiation levels.

Water contaminated with radiation was found in trenches close to two of the turbine buildings. Elevated radioactivity levels began showing up in the ocean near the plant. On April 2, workers began pouring concrete in an effort to patch an apparent leak discharging radioactive water directly into the sea.

Elevated levels of radioactivity have been found in foodstuffs grown in the region around the plant. The Japanese government has ordered the evacuation all areas within 20 kilometers (12.5 miles) of the plant, except for authorized personnel

As of the writing of this testimony, the reactor cores and spent fuel pools remain at risk of meltdown for lack of sufficient cooling. The situation has been complicated by the absence of sound data on the conditions in the plants. In many cases,

scientists must make inferences on the plants' conditions based on remote types of information, and these inferences are necessarily subject to great uncertainty. It may take several weeks, if not months, to bring the situation under control and assure the site's safety. More than three weeks from the earthquake, the International Atomic Energy Agency reported that "overall, at the Fukushima Daiichi plant, the situation remains very serious."

Q. There are many differences between the Japanese situation and situations that might emerge at the Lee nuclear station. In light of these differences, why should policy-makers in South Carolina be concerned about the events in Japan?

A. The events in Japan have (a) dampened investor willingness to invest in nuclear power at this time, (b) exposed catastrophic risks that were thought to have been covered already by safety procedures and requirements, c) reinforced the reality that nuclear facilities are susceptible to serious problems that cannot be foreseen, prevented, or remediated, (d) prompted the Nuclear Regulatory Commission to initiate an immediate short term (90 day) and a later, long term (beginning after 90 days) review of the risks to all U.S. nuclear reactors, in an effort to determine the extent of risk to the public and whether safety regulations require changes in light of the Japanese reactor crisis. Efforts to license new reactor designs will likely be slowed considerably until the situation is better understood, which itself is likely to take weeks or months, and then pending the safety review the NRC will undertake.

Q. How have other nations reacted to the events at Fukushima?

A. In light of the Fukushima catastrophe, China has temporarily suspended its nuclear generation development program. Germany has taken seven nuclear plants

off line, and suspended license extensions. Many countries have initiated nuclear power safety reviews, including Canada and fourteen European nations.

Q. The Japanese plants were GE Boiling Water reactors that require active cooling, whereas Duke plans to put up two AP1000 nuclear reactors at Lee, with a passive cooling feature that does not exist in the GE BWR reactors. Given that difficulty with cooling is a primary presenting problem at Fukushima, isn't it true that the use of the AP1000 design will eliminate emergency cooling questions for Lee?

A. No. First, the AP1000 design would provide no more than 72 hours of passive, gravity-based cooling. In addition, it is not clear that the pressure levels that can be obtained through gravity cooling would be sufficient to push cooling water into a containment building under increasing pressure. Back-up pump-based cooling systems will still be needed. And these will be subject to the same risks of failure seen in the present crisis, and others. For example, back-up battery power systems in United States reactors are designed to last a much shorter time than those in Japanese plants, and in any event may not have the power needed to pump water at sufficient pressures to avoid the kind of cooling problems plaguing the Fukushima meltdown-control efforts.

Q. Aren't there proposals in Congress to increase the battery back-up time available to nuclear plants?

A. Yes. There are proposals to lengthen the time battery back-up will work. The Nuclear Energy Institute, however, has suggested to Congress in recent hearings that the costs of adding to battery back-up time are too high. Among other things I would note that this indicates some resistance in the industry from the very beginning of the review of Fukushima safety problems to spending money to avert similar calamities.

What is clear is that the draw-down of back-up battery power is frustrating

recovery work at the Fukushima plant, because without power for monitors and data communication from plant sensors, engineers have been unable to measure critical factors at the units (such as water levels, pressure levels, temperatures, and the like). Not only have engineers struggled to correct problems at the plants, they have had to struggle to understand what problems they are dealing with, and their magnitude.

Q. One of the key cooling problems at Fukushima is the inability to keep the spent fuel stored in the storage pool covered in water, and thus cooled. What are the prospects in the United States for addressing such problems?

A. The question of spent fuel handling continues to interfere with the renaissance of the nuclear energy industry. As noted above, the crisis in Japan has been caused at least in part because of inability to maintain water cooling levels in the spent fuel storage pool at Fukushima. U.S. reactors so far have been allowed to store even more used fuel in storage pools than the Japanese plants, thus exposing them to even higher levels of risk in the event of a loss of water cover. The federal government has made no appreciable progress on development of a permanent repository for spent nuclear fuel. For some years, policy makers thought that the site at Yucca Mountain in Nevada would be developed for this purpose. Moneys have been collected from ratepayers for the ostensible purpose of funding a repository. The current Administration has stated that it no longer considers Yucca Mountain a viable option, and progress towards development of that site has stopped. Indeed, the inability of federal policy makers to settle the spent fuel issue prompted Duke to sue the federal government, claiming that it had defaulted on its obligation to use the ratepayer funds it

has collected from nuclear power generators over the years to solve the storage problem. Duke was able to settle that case recently.

There are also proposals in Congress to reduce the amount that can be stored on site, which would exacerbate the problem of where to store still-radioactive used fuel. Further there are some voices in the nuclear industry pushing to replace reactors using fuel rods (including the proposed Lee reactors) with pebble-bed reactors, which are ostensibly designed to be inherently less susceptible to cooling loss, spent fuel storage and associated meltdown risks.

Q. Duke says that it anticipates receiving its Combined Construction and Operation License (COL) from the NRC in 2013. Is this expectation reasonable?

A. No. For a number of reasons it is unlikely that Duke will be able to obtain a COL in the near term. For one thing, the design of the AP1000 is still not complete and fully certified. The AP1000 design has already been held up six years since its initial "certification" in 2005 as a usable design for receipt of a COL. It is likely to be held up now for many additional months or years, given the need to address Fukushima questions.

Q. The NRC chief of staff testified recently that the ongoing disaster in Japan would not affect licensing activities in the United States. Does that not mean that licensing will proceed on the schedule anticipated by Duke?

A. No. Putting aside the fact that final certification of the AP1000 design has been delayed numerous times, there remains the fact that changes to tighten safety design requirements are likely to emerge from the NRC's long term review of the Japan disaster. NRC chief of staff William Borchardt told Congress that if Japan's experience shows that changes in reactors are needed here, those will be ordered immediately,

regardless of the status of the plant's license, license extension or license application. In other words, until the fallout from the Japanese calamity is fully absorbed into the design of new nuclear plants, those designs will be subject to reopening. One could argue that this approach is in fact worse for the industry, because it puts nuclear station developers at risk of putting engineering, planning or even construction resources into the plant, and then have to abandon those efforts and start again on some part of the design and construction of the units.

Q. What would be the impact of additional delay in the receipt of a COL for Lee?

A. Delay in receipt of the COL will likely result in higher costs, if design work proceeds now on the most recent version of the AP1000 design, since such work may well have to be redone as the regulators are able to clarify any new safety requirements in the wake of the Japanese catastrophe. Per kW costs of nuclear plants have continued to rise, with the Energy Information Agency recently pegging the cost of construction at well over $5000 per kW. At the same time, its own decision to delay construction, Duke avoided the need to make investments in transmission right-of-way purchases, long-lead material reservations, and construction of the training simulator. Jamil Direct at p. 18, lines 17-19. In these circumstances, even if the NRC is willing to license Lee in the near future, Duke would be well advised to hold back until there is greater clarity as to what changes the Japanese disaster will prompt in plant design and construction in the United States.

Q. Before the catastrophe in Japan, what was the status of nuclear projects in the United States.

A. Even before the Fukushima events, most of the projects that were said in 2008 to constitute the nuclear renaissance have been cancelled, suspended or greatly delayed, in many cases because of the intervening cost increases. Again, not counting the likely impacts of Fukushima, EIA recently increased its estimate of the cost of new reactors by 37% during 2010 alone. John Rowe, respected CEO of Exelon (a major owner of nuclear generation in the United States) said publicly a year before the Fukushima events that low natural gas prices would postpone the construction of nuclear power for a decade at least. Just three days before the unforeseeable events at Fukushima, Rowe told the American Enterprise Institute[2] that that the United States should not expand subsides for nuclear power plants. He argued that low natural gas prices and lack of a tax on carbon dioxide make developing nuclear power uneconomic. Duke's statement that "interest in new nuclear generation has increased in the United States over the past several years" (Amended Application, p. 4) was incorrect even before the Fukushima catastrophe.

Q. What has the impact of the Fukushima disaster been on financial results for nuclear power firms?

A. Certainly in the near term, the disaster at the Fukushima plants has dealt a body blow to the stock value of firms whose revenues depend on the construction and operation of nuclear plants. Uranium mining firms have seen stock prices drop 25% and 40%. Nuclear energy stock indexes were down by double-digits in the wake of the disaster. A Standard & Poor's report on March 15 warned that construction of new plants could be delayed, amid a "renewed public focus on the inherent risks of nuclear

[2] Link to Rowe's talk at the American Enterprise Institute.

power." This could result in deteriorating economics for new plant construction, according to the ratings agency. Some stock analysts noted that NRG in Texas might lose its federal loan guarantee and have to take a near term loss on its South Texas project, but that the cancellation would spell good news for the firm's finances over the longer term. An analyst from Bank of America dropped his rating on SCANA (and Entergy) from neutral to underperforming. Meanwhile, Tokyo Electric Company, owner of the Fukushima plants, has lost over $25 billion in equity value as a result of the disaster, and there is talk of nationalizing the firm.

Q. Are there reasons to believe that Duke is not fully committed to the Lee project?

A. Yes. Duke says it wants to pursue the Lee option, but nowhere states that the Lee plants are essential to meeting its customers' needs. Again, Duke has recently stated publicly that it will not pursue the Lee project unless it receives "super-CWIP" ratemaking treatment from the North Carolina legislature and Commission. Duke has not received federal loan support, and in the present U.S. budgetary climate is not likely to receive it. In effect, Duke wants a guarantee of cost recovery for its North Carolina portion, whatever happens. Without that, Duke will not proceed.

Q. What are some implications of Duke's Lee construction pre-conditions for Duke's South Carolina customers?

A. Duke's position telegraphs that Duke is not confident that the Lee project is cost-effective (and thus fundable) on its own merits. Of course, pre-approval such as that sought by Duke in the instant docket does not eliminate risk, but merely transfers it to consumers. And Duke's conditions on proceeding also leave South Carolina in a

position where North Carolina will decide if the pre-construction costs incurred by South Carolina customers are going towards project completion, or abandonment.

QUESTIONS OF NEED FOR LEE POWER

Q. Please discuss the need of Duke's South Carolina customers for the output of the proposed Lee station plants. On what does Duke base its claim that it must proceed now with the Lee plants?

A. The Company bases its claim of need for the two nuclear reactors at the Lee site on the need "to serve customer needs in the 2021 time frame." Amended Application at p. 2. James E. Rogers, Chairman, President, and Chief Executive Officer of the Company's parent, Duke Energy Corporation, testifies in his direct testimony in this docket that the Lee plants are needed "to meet sustained customer load growth, while maintaining prudent flexibility to respond to dynamic regulatory, environmental, and operating circumstances." Rogers Direct at p. 5, lines 14-16. Janice Hager, Vice President, Integrated Resource Planning and Regulated Analytics, states that Duke Energy Carolinas' "need for additional capacity grows over time due to load growth, unit capacity adjustments, unit retirements, and expirations of purchased-power contracts." Hager Direct at pp. 6-7. Hager argues that Duke Energy Carolinas requires a 17% reserve margin (excess of cumulative equivalent capacity as percent of adjusted system peak) in order to assure reliability. Hager Direct at p. 4 (19-23). She further states that, given "the pending "retirements of the Company's coalfired generation assets, the projected load growth over time, and the expiration of

purchased power contracts, additional generating capacity will be required to ensure a reliable supply of power." p. 12 (8-11). For a variety of reasons (discussed later in my testimony), Duke has chosen to develop the Lee station as its source of additional capacity to meet the claimed future needs of customers in North and South Carolina. Rogers Direct at pp. 5-6.

Q. How do the capacity needs in the 2010 IRP compare to the needs as of the the Company's original proposal to proceed with Lee?

A. Future capacity needs are now forecast to be much lower than the future capacity needs forecast in the 2007 filing. Duke now forecasts that, given load growth, normal retirements and contract expirations, and the retirement of approximately 1000 mW of coalfired generation as part of the Cliffside project, it will require an additional 2,200 mW of capacity by 2020, and 6,000 mW by 2030. Rogers Direct at pp. 5-6. According to Duke, it will need an additional 4,300 mW of power by 2026 (the last year of the corresponding 2007 forecast). Hager Exhibit A. By contrast, in its filing for Lee pre-construction approval in December 2007, Duke forecast the need for approximately 7,900 mW of capacity by 2020, and 10,280 mW by 2026. Compare the Direct Testimony of Janice Hager in Docket 2007-440-E, p. 5, Hager Table 1, with the Direct Testimony of Janice Hager in the present docket, Hager Exhibit A. Thus, in the three years since the initial application by Duke, it has lowered its forecasts of capacity needs for 2020 and 2026 by 5,700 and 4,300 mW respectively. Duke has dropped its capacity needs forecasts by 72% for the year 2020, and by 42% for the year 2026. These are enormous reductions in forecast capacity need, and call into question the need to continue with a plan to add 2,234 mW from Lee during this time.

	Duke Carolinas forecast capacity need 2020 [mW]	Duke Carolinas forecast capacity need 2026 [mW]
2007 IRP	7,900	10,280
2010 IRP	2,200	6,000
Change in 3 years	-- 5,700	-- 4,280
Percent Change	lowered 72%	lowered 42%

Q. What are the implications of the Jacksonville off-system-sales option on South Carolina ratepayers?

A. The fact that Duke has agreed to give an out-of-state utility an option on Lee output also shows that Duke itself is not sure it needs the capacity from the Lee plants, at least not on its current timetable.

Q. Assuming Duke's forecast of demand is accurate, what alternatives does Duke have to meet that need?

A. Duke has available a range of means to meet its forecast need. These include additional natural gas generation, faster and deeper exploitation of energy efficiency and demand management, delay in decommissioning existing resources, additional renewable generation and power purchases, and equity participation in generation now under construction. Today, natural gas generation is widely seen as an important bridge fuel.

Q. What change has there been in forecast gas costs since the original approval of the Lee proposal?

A. Gas price forecasts have been reduced substantially, by the discovery of the so-called Marcellus shale deposits. While they have not been exploited yet, and there remain environmental and other issues regarding the manner of extraction, their enormous potential has already driven down analysts' forecasts of natural gas costs.

This reduction in forecast gas costs in turn has greatly reduced the forecast cost of the gas-fired alternatives to Lee and other generation.

Q. What has been the recent reduction in forecast gas costs?

A. The federal Energy Information Administration (EIA) recently lowered its annual average natural gas price wellhead forecast through 2035 to $6.53 per thousand cubic feet (in 2009 dollars). As recently as mid-December 2010, EIA had forecast wellhead prices for 2035 to be $8.19 per thousand cubic feet. Thus, in a short time the long-term forecast for natural gas has dropped $1.56 per thousand cubic feet, or 20 percent.

Q. Duke states that it must plan for the eventuality that costs of fuels emitting greenhouse gasses will rise. Doesn't this make natural gas a worse option than nuclear?

A. No. It is true that all fossil fuels when burned for energy give off greenhouse gasses. But natural gas plants emit half the CO2 that coal plants do. In addition, natural gas plants that are capable of ramping (intermediate, e.g.) provide a capacity complement to intermittent renewables, such as wind and solar, thus extending the value of such renewable sources.

Q. Does Duke's 2010 IRP propose to exploit all demand side resources?

A. No. By far the least expensive power is power that does not need to be generated to get the same job done: negawatts. Duke does include its baseload forecast of projected DSM activity and savings in its 2010 IRP. However, the IRP notes that it would be possible to achieve higher levels. Pursuing the high-case DSM activity would add between 440 and 1300 mW of equivalent capacity to the Duke

portfolio by the end of the planning period. The amount could be even greater if the efficiency markets were transformed so that Duke could harvest the full technical potential for efficiency in its service areas.

Q. Are there other potential resources to meet power needs over the planning horizon?

A. Yes. Many forms of renewable energy are being exploited today, and the costs have been coming down steadily. Even in the absence of federal standards, Duke intends to pursue renewables in North Carolina, where the legislature has enacted a renewable portfolio standard. All investor-owned utilities in North Carolina must supply 12.5% of 2020 retail electricity sales (in North Carolina) from eligible renewable energy resources and/or energy efficiency savings by 2021. South Carolina utilities have been exploring local renewable resources, and Duke could obtain additional capacity from this source.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Q. Please briefly summarize your conclusions and recommendations.

A. Based on my review of Duke's request for approval to incur costs to proceed with the Lee project at this time, I conclude that it would not be prudent for Duke to proceed before the implications of Fukushima for nuclear plant design and operation are known, and any new regulations have been adopted and incorporated into the Duke project. Duke should minimize ongoing expenditures at the Lee site. I also conclude that, rather than proceed with the Lee project, at least at this time, Duke should explore the possibility of buying into the ongoing V.C. Summer plant.

As I stated in the introduction to this testimony, I make the following recommendations for Commission action on Duke's Amended Application now before the Commission:

(a) Reject the Duke application for approval of further pre-construction investments at Lee, at least until

[i] the NRC and the industry have completed their review of the problems at the Fukushima nuclear power plants, and have adopted any revisions to standard designs and regulations for new nuclear plants in the United States, and Duke has incorporated these changes,;

[ii] Duke has received such approvals and authorities as it says now that it needs from North Carolina for cost recovery in that state, including so-called super-CWIP and the sale of an option on Lee capacity to JEA, and

[iii] Duke has received authority for the sale of the option to JEA from this Commission, if on a finding that the benefits to South Carolina consumers exceed the costs and risks of the option.

(b) Require Duke, when and if it does return to the Commission for pre-approval of further investments in the Lee plant, to update its IRP, and reflect different mixes of options without Lee, including greatly increased investment in renewables and DSM in South Carolina, and to explain the need for baseload power as opposed to peaking or intermediate power.

(c) Require Duke to attempt to purchase capacity from or a share in the Summer nuclear station in Jenkinsville, and if unsuccessful, explain the reasons to the Commission.

If the Commission does authorize additional pre-construction investments by Duke at the Lee station at this time, I recommend that that the authorization be limited to the costs of those activities necessary only to preserve the option of proceeding with the plant on a reasonable timetable, taking into account the changed circumstances facing Duke and its South Carolina customers since the utility initiated the Lee project in 2007.

Q. Does this conclude your testimony?

A. Yes.

Exhibit NB-1

Nancy Brockway
NBrockway & Associates
10 Allen Street, Boston, MA 02131
nbrockway@aol.com
617-645-4018

Experience

Principal, NBrockway & Associates, utility consulting, 2003 to present
Director of Multi-Utility Research and Policy, NRRI, 2/08 – 10/08
Commissioner, New Hampshire Public Utilities Commission (1998-2003)
Utilities consultant and attorney, National Consumer Law Center (1991-1998)
General Counsel, Massachusetts Public Utilities Commission (1989-1991)
Staff Attorney, Assistant General Counsel, Massachusetts Commission (1986-1989)
Hearings Officer, Senior Staff Attorney, Maine Public Utilities Commission (1983-1986)
Executive Director, Maine Legal Services for the Elderly, Inc. (1981-1983)
Staff Attorney, Directing Attorney, Pine Tree Legal Assistance, Inc. (1979-1981)
Staff Attorney, UMass Student Legal Services (1977-1979)
Staff Attorney, Western Massachusetts Legal Assistance, Inc. (1976-1977)
Staff Attorney, Legal Aid Society of New York (1974-1976)

NARUC Committee Memberships and Public Service

NARUC Energy Resources and Environment Committee
NARUC Consumer Affairs Committee (Vice-Chair)
Consumer Affairs Committee, New England Conference of Public Utility Commissioners (Chair)
Steering Committee, National Council on Competition in the Electric Industry
ISO-NE Advisory Committee
NEPOOL Review Board Advisory Committee
NARUC Ad Hoc Committee on Competition in the Electric Industry
NARUC Committee on Communications
FCC Joint Conference on Accounting
North American Numbering Council
NBANC Board of Directors

Other Public Service

Board Chair, PAYSAmerica, Inc., 2004-2008
Member, New Hampshire Site Evaluation Committee, 1998-2003
Independent Conservation & Load Management Expert, MA Energy Office, 1991-1993.
Member, Massachusetts Energy Facility Siting Board
Member, Massachusetts Board of Registration of Allied Mental Health and Human Services Professional
Member, Energy and Transportation Task Force, President's Council on Sustainable Development

Bar Memberships

Massachusetts
New York State and Maine (inactive)

Education

B.A. with honors, 1970, Smith College, Northampton, MA
J.D., 1973, Yale Law School, New Haven, CT
Coursework in statistics, Northeastern University, Boston, MA

NANCY BROCKWAY: TESTIMONIES

Case name	Client Name	Topic	Jurisdiction & Docket No.	Date(s) Filed
Petition of PECO Energy Company for approval of its smart meter technology procurement and installation plan: petition for approval of PECO Energy Company's initial dynamic pricing and customer acceptance Plan	Pennsylvania Consumer Advocate	Implementation of Smart Grid plan and preparation for dynamic pricing introduction.	Pennsylvania PUC Docket No. M-2009-2123944	12/23/10; 1/12/11
In the Matter of: An investigation of natural gas retail competition programs	AARP Kentucky	Introduction of retail gas competition.	Kentucky PSC Case No. 2010-00146	6/21/10; 9/21/10
Alberta Smart Grid Inquiry	Office of the Utilities Consumer Advocate	Status of Smart Grid Developments in North America	Alberta Utilities Commission Application No. 1606102 Proceeding ID. 598	6/12/10 [report]
In the Matter of WMECO Smart Grid Pilot Program, filed per Section 85 of the Green Communities Act	Low Income Weatherization and Fuel Assistance Program Network, Massachusetts Energy Directors' Association	Smart Grid pilot design	Massachusetts DPU Docket No. 09-34	5/5/10
Nevada Power and Sierra Pacific Power Integrated Resource Plans	Attorney General, Bureau of Consumer Protection	AMI security, privacy and customer acceptance	Nevada PSC Docket Nos. 10-02009 10-03023	4/26/10

NANCY BROCKWAY: TESTIMONIES				
Application of Louisville Gas & Electric Co. for an Adjustment of its Electric and Gas Base Rates	AARP	Cost allocation and rate design	Kentucky Public Service Commission Case No. 2009-00549	4/22/10
In the Matter of NSPI Application to Approve Nova Scotia's Electricity Demand Side Management Plan for 2011	Consumer Advocate appointed by the Utilities and Review Board	DSM program design and evaluation	Nova Scotia UARB Docket No. P-884(3)	4/9/10
In the Matter of the NSTAR Smart Grid Pilot Program, filed per Section 85 of the Green Communities Act	Low Income Weatherization and Fuel Assistance Program Network, Massachusetts Energy Directors' Association	Smart Grid pilot design	Massachusetts DPU Docket No. 09-33	11/6/09
Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company and Pennsylvania Power Company for Approval of Smart Meter Technology Procurement and Installation Plan	Pennsylvania Office of Consumer Advocate	Smart grid deployment; demand response and energy efficiency.	Pennsylvania PUC Docket No. M-2009-2123950	10/21/09
IMO Potomac Electric Company and Delmarva Power & Light Company Request for the Deployment of an Advanced Metering Infrastructure and Establishment of Regulatory Assets	Maryland Office of Public Advocate	Smart grid deployment; demand response and energy efficiency.	Maryland PSC Case No. 9207	10/20/09
Petition of West Penn Power Company d/b/a Allegheny Power for Expedited Approval of its Smart Meter Technology Procurement and Installation Plan	Pennsylvania Office of Consumer Advocate	Smart grid deployment; demand response and energy efficiency.	Pennsylvania PUC Docket No. M-2009-2123951	10/16/09

NANCY BROCKWAY: TESTIMONIES

IMO BG&E Authorization to Deploy a Smart Grid Initiative and to Establish a Surcharge Mechanism for the Recovery of Cost.	Maryland Office of Public Advocate	Smart grid deployment; demand response and energy efficiency.	Maryland PSC Case No. 9208	10/13/09
IMO DTA of FortisAlberta, Phase I/II, 2010-2011	Utilities Consumer Advocate of Alberta	Smart grid deployment	Alberta Utilities Comm'n App. No. 1605170	10/9/09
IMO Unitil and National Grid Smart Grid Plans per Section 85 of the Green Communities Act	Low Income Weatherization and Fuel Assistance Program Network, Massachusetts Energy Directors' Association	Smart Grid pilot design	Massachusetts Department of Public Utilities Docket Nos. 09-32 and 09-31	8/31/09
Columbia Gas Rate Case	AARP	SFV rate design, miscellaneous fees, recovery of uncollectibles via rider	Kentucky PSC Case No. 2009-00141	7/29/09
Appalachian Power Company, etc. ENEC proceeding	Covenant House and West Virginia CAG	Impact of proposed rate increase on low-income customers and means to improve collection procedures.	West Virginia PSC Case No. 09-0177-E-GI	5/26/09
In Re Combined Application of South Carolina Electric and Gas	Friends of the Earth	Need for and cost of proposed Summer nuclear power plant; alternatives including energy efficiency and renewables.	South Carolina Public Service Commission, Docket No. 2008-196-E.	Direct: 10/17/08 Surrebuttal: 11/17/08
Nova Scotia Power, Inc.	NS UARB Consumer Advocate	Proposed general rate increase, rate design.	Nova Scotia Utility and Review Board, P-886	12/07
Pike County Commissioners v. PCL&P	Pennsylvania Office of the Consumer Advocate	Options to address rate shock in transition to uncapped competitive POLR rates	Pennsylvania Public Utilities Commission, Docket No. C-20065942	11/06 (hearing in January 07)
Nova Scotia Power, Inc.	NS UARB Consumer Advocate	Extra Large Industrial Interruptible Rates	Nova Scotia Utility and Review Board, P-883	8/06
UGI/Southern Union, Proposed Merger	Pennsylvania Office of the Consumer Advocate	Impacts of the Proposed Merger on Ratepayers and Rates, Risks and Benefits of Proposed Merger, Synergies, Reliability	Pennsylvania Public Utilities Commission, Docket Nos. A-120011F2000, etc.	5/06
SEMCO Energy Services Gas Cost Recovery Plan	PAYS America, Inc.	Relationship Between DSM and Gas Costs	Michigan Public Service Commission, Docket No. U-14718	5/06 (not admitted)
Re: Electric Service Reliability and Quality Standards	Delaware Public Service Commission	Application of Proposed Rules to Competitive Suppliers and Cooperatives	Delaware Public Service Board, Docket No. 50	1/06

NANCY BROCKWAY: TESTIMONIES

Exelon/Public Service Electric & Gas, Joint Petitioners	New Jersey Division of the Ratepayer Advocate	Impacts of Proposed Merger on Service Quality, Reliability, and Gas Safety, and Options to Maintain Historic Standards.	New Jersey Board of Public Utilities, BPU Docket No. EM05020106 OAL Docket No. PUC-1874-05	11/05-12/05
Exelon/Public Service Electric & Gas, Joint Petitioners	New Jersey Division of the Ratepayer Advocate	Risks and Benefits of Proposed Merger of Exelon and PSE&G, Options for Assuring Benefits and Mitigating Risk	New Jersey Board of Public Utilities, BPU Docket No. EM05020106 OAL Docket No. PUC-1874-05	11/05-12/05
Nova Scotia Power, Inc.	NS UARB Consumer Advocate	Economic Development Rates	Nova Scotia Utility and Review Board, P-882	10/05
Nova Scotia Power, Inc.	NS UARB Consumer Advocate	Revenue Requirements, Cost Allocation, Rate Design, Demand Side Management, Economic Development Rates	Nova Scotia Utility and Review Board, P-882	10/05 – 11/05
Bay State Gas Company	Local 273	Customer Service, Reliability, Low-Income Protections, Revenue Requirements	Massachusetts DTE, Docket No. 05-27	7/05
Nova Scotia Power, Inc.	Nova Scotia Utility and Review Board	Domestic Consumer Perspective on Proposed Rate Case Settlement Agreement	Nova Scotia Utility and Review Board, P-881	1/05
Cincinnati Bell Alternative Regulation	Communities United for Action	Universal Service and alternative regulation of telephone service	PUCO, Case No. 96-899-TP-ALT	12/97
UGI-Electric Utilities, Inc.	Pennsylvania OCC	Universal Service issues in electric restructuring plans; including efficiency funding	PA PUC, No. R-00973975	1997
West Penn Power Co.	"	"	PA PUC, No. R-00973981	1997
Duquesne Light Co.	"	"	PA PUC, No. R-00974101	1997
PECO, Inc.,	"		PA PUC, No. R-00973953	1997
PP&L	"	"	PA PUC, No. R-00973954	1997
Met Ed.	"	"	PA PUC, No. R-00974008	9/97
Penelec	"	"	PA PUC, No. R-00974009	9/97
In the Matter of the Electric Industry Restructuring Plan	New Hampshire Legal Services	Low-income rates and DSM, impacts of restructuring on low-income consumers	New Hampshire Public Utilities Commission, D.R. 96-150	Nov., Dec. 1996

NANCY BROCKWAY: TESTIMONIES

Notice of Inquiry/ Rulemaking. Establishing the procedures to be followed in electric industry restructuring.	Mass. CAP Directors Association, Mass. Energy Directors Association, named Low-Income Intervenors	Electric industry restructuring	Massachusetts Department of Public Utilities, D.P.U. 96-100.	to 10/98
Telecon Universal Service Docket	Pennsylvania Office of Consumer Advocate	Rate rebalancing, universal service, telephone penetration.	Pennsylvania Public Utilities Commission Docket No. I-00940035	1996
In Re: Complaint of Kenneth D. Williams v. Houston Lighting and Power Co.	Named Low-Income Consumers	Customer service, rate design, demand-side management, revenue requirements	Texas Public Utilities Docket No. 12065	1994-5
Open Access Non-Discriminatory Transmission Services ... and Recovery of Stranded Costs	Direct Action for Rates and Equality, Providence, Rhode Island	Open transmission access in interstate commerce, and stranded costs recovery.	FERC, Nos. RM95-8-000, RM94-7-000.	1994-5
Bath Water District, Proposed Increase in Rates	Maine Office of Public Advocate	Water district cost allocation, rate design, low-income water affordability	Maine Public Utilities Commission, Docket. No. 94-034	12/94, 3/95
Application of Ohio Bell Telephone Co. for Approval of Alternative Form of Regulation	Legal Aid Society of Cleveland and Dayton	Definition of universal telecommunications service, proposal for Universal Service Access program (USA).	Public Utilities Commission of Ohio, Case No. 93-487-TP-ALT	5/4/94
Pennsylvania PUC vs. Bell Telephone of Pennsylvania	Pennsylvania Public Utility Law Project	Definition of "universal telecommunications service"	Pennsylvania PUC No. P-930715	filed 12/93
Joint Application for Approval of Demand-Side Management Programs, etc.	LG&E; Legal Aid Society of Louisville, other Joint Applicants	Cost-effective DSM programs for low-income customers; collaborative process to design DSM programs; cost allocation and cost recovery.	Kentucky PSC No. 93-150	11/8/93
Texas Utilities Electric Company	Texas Legal Services Center	Costs and benefits of DSM targeted to low-income customers	Texas PUC No. 11735	1993
Texas Utilities Electric Company	Texas Legal Services Center	Proposed Maintenance of Effort Rate for low-income customers	Texas PUC No. 11735	1993
Philadelphia Water Department	Philadelphia Public Advocate	Costs of Unrepaired System Leaks	Philadelphia Water Comm'r.	1992
New England Telephone	Rhode Island Legal Services	DNP for non-basic service	Rhode Island PUC, No. 1997	1991
Kentucky Power Co.	Kentucky Legal Services	Low Income Rate	Kentucky PSC No. 91-066	1991

NANCY BROCKWAY: TESTIMONIES				
Investigation into Modernization	Invited by Commission	Impact of modernization costs on low income telephone users	New York PSC	1991